013374 - Prado Dam, Corona, CA

Contributed by Greg Fuderer
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Response Summary - Public Information Meeting
February 4, 2005

Prado Dam Construction On February 4, 2005, the U.S. Army Corps of Engineers, Los Angeles District (Corps) held a public information meeting to brief residents and businesses in the vicinity of Prado Dam on the Santa Ana River Mainstem Flood Control Project, current construction at the dam as part of the project, and the storm and seepage events that occurred on January 13 and 14.
(Click Here - 43K Adobe PDF)

News Releases:

PRADO DAM UPDATE 12PM, 17 JANUARY, 2005

PRADO DAM UPDATE 7PM, 14 JANUARY, 2005

PRADO DAM SAFE ACCORDING TO THE U. S. ARMY CORPS OF ENGINEERS - 14 JANUARY, 2005

PRADO'S EXTREME MAKEOVER - 06/03/04

Executive Summary: The Los Angeles District has begun construction to increase the capacity of the reservoir behind Prado Dam. The modifications to the dam, which will take place in three phases over the next five to eight years, consist of:

- raising the height of the dam 30 feet, building a new intake tower and constructing improvements to the dam’s outlet works (Mar 2003 – Oct 2006);
- constructing dikes in the basin to protect property (Sep 2004 – Sep 2007);
- and raising the height of the adjacent spillway 20 feet (Jul 2006 – Jan 2008).

The modifications will provide an additional 140,000 acre-feet to the reservoir. (One acre-foot is the volume of water that would cover one acre with one foot of water.) These changes will increase Prado Dams’ current 70-year level of protection to 190-year protection. These new improvements would prevent $15 billion in damages.

Prado Dam is located in Riverside County approximately 2 miles (3.2 kilometers) west of the city of Corona just downstream from where Chino Creek, Cucamonga/Mill Creek and Temescal Creek converge. These creeks combine with the Santa Ana River to drain the largest watershed in southern California. The dam is located on the Santa Ana River approximately 30.5 miles (49 kilometers) upstream of the Pacific Ocean. Portions of the reservoir are in both Riverside and San Bernardino counties.

The total cost of the improvements to Prado Dam is estimated at $430 million ($221 federal, $209 non-federal). The non-federal sponsor for this project is Orange County Flood Control District.

The project is authorized under the 1986 Water Resources Development Act (WRDA), the 1988 Energy and Water Appropriation Act (San Timoteo), and Section 309 of WRDA 1996. In 1997 federal officials, following the appropriate laws, concluded that Prado Dam is distinct from the Santa Ana River project. (See “Santa Ana Mainstem Project” below.)

Important Information:
Prado Dam provides flood control and water conservation storage for Orange County. It is the downstream element of the Santa Ana River flood control system. The purpose of the project is to collect runoff from the uncontrolled drainage areas upstream along with releases from other storage facilities.

Prado Dam was completed in April 1941. It is located at the upper end of the Lower Santa Ana River Canyon, which is a natural constriction controlling 2,255 square miles (5,840 square kilometers) of the 2,450 square mile (6345 square kilometer) Santa Ana River watershed. Authorization for the project construction is contained in the Flood Control Act of June 22, 1936 (PL 74-738). Modifications to the dam affect the basin below 566 feet elevation. The basin comprises more than 11,500 acres, 4,100 acres of which are riparian habitat (mostly willow woodland), a 4,823-acre recreation area

(1041 developed, 3782 undeveloped) and 2,400 acres owned by the Orange County Water District.

Improvements include construction of a new intake structure and outlet conduits, incorporating channelization from the base of the dam to the gauging station drop structure. Improvements to the outlet will increase outflow from 9,000 cubic feet per second (cfs) to a controlled outflow capacity of 30,000 cfs.

Dike construction will reduce the amount of real estate necessary to acquire. The higher water reservoir surface requires that the local sponsors protect public and private property from reservoir flooding by acquiring the real estate within the Prado Dam basin. Other proposed features (new dikes and floodwalls, intermittent levee and bank protection) to prevent flooding of low-lying facilities around the perimeter of the basin and protect structures up- and down-stream of the dam include the following:
· Norco Bluffs toe stabilization;
· a dike at the Corona Sewage Treatment Plant;
· a dike at the Alcoa Aluminum Plant on Rincon Road;
· a dike and floodwall at the National Housing Tract adjacent to the homes on Greenbriar Avenue and Meadowview Street;
· a floodwall along River Road just south of the Santa Ana River;
· a dike (River Road Dike) about 2,000 feet east of Hellman Avenue and north of River Road;
· two dikes at the California Institute for Women;
· a floodwall at the Yorba-Slaughter Adobe;
· an auxiliary dike and floodwall from the spillway to Auto Center Drive;
· a dike along Highway 71 joining the dam.

Generally, when the water surface elevation in the reservoir pool is below the top of the buffer pool elevation (494.0 feet NGVD during the flood season, 505.0 feet NGVD during the non-flood season), water conservation releases are made. These releases are coordinated with the Orange County Water District and are based upon the capacity of their groundwater recharge facilities and agreements with other agencies. If the water surface in the reservoir exceeds the top of the buffer pool, flood control releases commence. The objective of the flood control operation is to drain the reservoir back to the top of the buffer pool as quickly as possible without exceeding the capacity of the channel downstream. In current practice, when the water surface in the reservoir exceeds the top of the buffer pool, releases are increased to match inflow up to 5000 cfs. When inflows exceed 5000 cfs, the excess water is stored in the reservoir.

Santa Ana Mainstem Project:
The Santa Ana Mainstem Project extends some 75 miles along the Santa Ana River – from the upper canyon in the San Bernardino Mountains downstream to the Pacific Ocean at Newport Beach. The project provides urban flood protection to growing communities in Orange, Riverside and San Bernardino counties. The system is designed to provide various levels of flood protection ranging from 100 to 190 years for areas most susceptible to damages from flooding.

The Mainstem project includes the following:
· Seven Oaks Dam in the upper Santa Ana River Canyon, to control a 350-year flood event at the dam site;
· 5.4 miles of trapezoid-shaped channel and 18 sediment basins inside the channel of San Timoteo Creek in the cities of San Bernardino, Loma Linda, Redlands and Colton;
· delineation of the 100-year floodway and floodway fringe between Seven Oaks Dam and Prado Dam; local authorities will manage this area according to guidelines established by the Federal Emergency Management Agency;
· modifications to the existing federal flood control levees at Mill Creek to restore their original Standard Project Flood level of protection;
· construction of a 100-year level of flood protection channel on the Oak Street Drain in the city of Corona;
· changes in the existing Prado Dam to provide a 190-year level of protection;
· channel improvements along Santiago Creek in Orange County to provide 100-year-level flood protection;
· construction of the lower Santa Ana River channel to provide 190-year level flood protection; and
· enhancement of 84 acres of degraded marshland at the mouth of the Santa Ana River for endangered species and the restoration of 8 acres of marshland for wildlife habitat.

Construction of the Mainstem project started in 1990 and various stages have been phased in based on budget approval and appropriations, engineering requirements, safety and environmental scheduling windows (for example, to avoid impacts on the breeding activities of species listed on federal protection lists).

Frequently Asked Questions:

Related Links:

Upcoming Events:

Maps:

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